

REMARKS/ARGUMENTS

The office action of June 17, 2008 has been carefully reviewed and these remarks are responsive thereto. Reconsideration and allowance of the instant application are respectfully requested. Claims 6, 27-30, 33-42 and 43-53 remain pending in this application. Claims 7 and 31-32 are canceled without prejudice or disclaimer and claims 1-5 and 8-26 were previously canceled without prejudice or disclaimer. New claims 43-53 have been added.

Clarification of Record

In the previous response, Applicants referred to various potential advantages, uses, and/or solutions in connection with the invention. Applicants wish to make it clear for the Examiner that such advantages and/or uses are merely illustrative, and are not necessarily required by the claims.

For example, Applicants stated on page 13 of the previous response how the inventor's solution enables the development of cheap devices of a very small size and can be integrated in PCMCIA or other compact devices to be built into personal computers for exchanging data in a wireless local area network. Applicants wish to clarify that this statement on page 13 was merely made to help the Examiner understand an illustrative potential use of the invention, and that such statements are not intended to limit the claims in any way. For instance, the claims do not require that an infringing device enables the development of cheap devices or is capable of integration into a PCMCIA or other compact device.

Rejections under 35 U.S.C. § 103

Claims 6, 7, 27-31, 37 and 39 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent no. 5,998,781 to Vawter, et al. ("Vawter") in view of U.S. patent no. 5,029,306 to Bull, et al. ("Bull"). Applicants respectfully traverse this rejection.

Claims 32-36, 38 and 40-42 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Vawter and Bull, as applied to claim 6 above, and further in view of U.S. patent no. 6,348,683 to Verghese, et al. ("Verghese"). Applicants respectfully traverse this rejection.

Independent Claim 6

Independent claim 6 as amended recites a first photodiode configured to receive optical signals from a laser, to generate a first millimeter wave signal based on the optical beat, and to receive a second millimeter wave signal from antenna terminals; and a second photodiode configured to receive the optical signals from the laser, to generate a third millimeter wave signal based on the optical beat, and to forward the third millimeter wave signal to the antenna terminals.

None of Vawter, Bull or Verghese, either alone or in combination, teaches or suggests such a configuration as now claimed.

An illustrative embodiment consistent with amended claim 6 is shown in the specification at Fig. 3. For instance, in the embodiment of Fig. 3, the recited first photodiode may be the receive (RX) photodiode and the recited second photodiode may be the transmit (TX) photodiode. As can be seen, both photodiodes are coupled to the same antenna terminals 40. Similarly, claim 6 recites that the first photodiode receives the second millimeter wave signal from antenna terminals, and that the second photodiode forwards the third millimeter wave signal to those antenna terminals.

The Office Action, in rejecting now-canceled claim 32 (which also recited two photodiodes), relies on Verghese to show two photomixers 26 and 38 (Fig. 1A). It is believed that the Office Action is comparing the recited first photodiode with photomixer 26, and the recited second photodiode with photomixer 38. However, in Verghese, photomixer 26 is connected to transmit antenna 28, and photomixer 38 is connected to a different receive antenna 36. Thus, even if Verghese were combined with Vawter and/or Bull, the resulting combination still would not provide two photodiodes receiving and providing signals to the same antenna terminals, as claimed.

Moreover, it is respectfully submitted that the Office Action is unclear as to the motivation for combining Bull with Vawter. For instance, on page 3, the Office Action states that “it would have been obvious for a person of ordinary skill in the art to at the antenna terminals disclosed by Bull to the LO generator disclosed by Vawter.” This sentence has mistakenly left out one or more words, rendering it unintelligible. Accordingly, it is submitted

that the rejection does not make out a prima facie case of obviousness. Should the Examiner continue to assert the combination, it is requested that the rejection be made clearer.

For at least these reasons, it is submitted that claim 1 is allowable over Vawter, Bull, and Verghese, either alone or in combination.

Independent Claim 48

Independent claim 48 is also allowable for at least similar reasons as discussed above with regard to claim 6.

Dependent Claims

The dependent claims are also allowable by virtue of depending from allowable independent claims, and further in view of the additional features recited therein.

For instance, new claims 43-47 and 49-53 recite particular circuit configurations of the photodiodes. None of the asserted references teach or suggest such circuit configurations.

Conclusion

All rejections having been addressed, Applicants respectfully submit that the present application is in condition for allowance, and respectfully solicit prompt notification of the same.

Respectfully submitted,
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